RTR-574: One Logger records Illuminance, UV, Temperature and Humidity

RTR-574

External UV and Illuminance Sensor / Temperature and Humidity Sensor (THA-3001)

Measurement Range

Illuminance: 0 to 130,000 lxh
UV Intensity: 0 to 30 W/cm^{2}h
Temperature : 0 to 55 °C
Humidity: 10 to 95 %RH

Water Resistance

None

RTR-574-H

External UV and Illuminance Sensor / High Precision Temperature / Humidity Sensor (HHA-3151)

Measurement Range

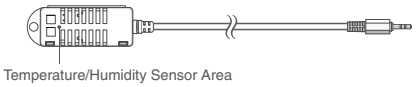
Illuminance: 0 to 130,000 lxh
UV Intensity: 0 to 30 W/cm^{2}h
Temperature : –30 to 80 °C
Humidity: 0 to 99 %RH

Water Resistance

None

Illuminance UV Sensor ISA-3151 (for RTR-574 / 574-H)

Temperature Humidity Sensor THA-3151 (for RTR-574)

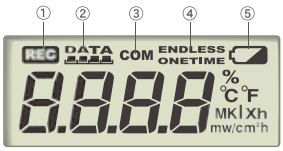


High Precision Temperature Humidity Sensor HHA-3151 (for RTR-574-H)

Note: Currently, these products are not compatible with RTR–500GSM

View Recording Status on Easy-to-Read Display

The large display allows you to easily check the RTR-574's recording status, battery status and remaining data capacity as well as all types of measurements.



① This mark comes ON when recording is in progress
② Scale shows the amount of stored data. A block is added for every 2000 readings.
③ Communication status is shown here
④ Current Recording Mode (ENDLESS or ONETIME) is shown here
⑤ This mark shows when it is time to replace battery

Illuminance Measurable in Wide Range

The Illuminance measurement range is from 0 to 130,000 lx; which means it is possible to measure in both dim moonlight and the bright summer sun. And with recording and display possible at a resolution down to 0.01 lx, measurements can be taken in conditions of even less light.

View Cumulative Values

Besides measuring and recording Illuminance, UV, Temperature and Humidity, the RTR-574 calculates and displays the "Cumulative Illuminance" and "Cumulative Amount of UV Light" during a recording session.

Cumulative Illuminance Display Range: 0 to 90,000,000 lxh
Cumulative Amount of Ultraviolet Light Display Range: 0 to 62W/cm^{2}h

Simple, Direct USB Connection

It is possible to connect an RTR-574 Unit directly to your computer with a USB cable. Data can be quickly and easily downloaded to your PC. If the computer has more than one USB port, it is possible to connect multiple RTR-574 Units to one computer at the same time.

Note: This is not possible if your operating system is Windows XP.

Logging Capacity: 8,000 data sets

Up to 8,000 data sets can be stored in one logger. One data set consists of readings for all channels in that type of unit: Illuminance, UV intensity, Temperature, and Humidity.

Recording Mode (Endless / One Time)

Select the Recording Mode from Endless or One Time. When using Endless Mode, upon reaching the logging capacity the oldest data is overwritten and recording continues. When using One Time, upon reaching logging capacity recording automatically stops. When using RTR-500NW or RTR-500AW as a Base Unit, only "Endless" is available.

Button Operation Possible

The buttons on the face of the RTR-574 Unit make it possible to change the LCD display pattern, start and stop recording, make or change recording interval settings, and turn power ON or OFF. To prevent unexpected errors in button operation, you can use the software supplied with the Base Unit to lock the button operation.

DISPLAY Button

The RTR-574 display can be changed as follows: Illuminance (lx, klx) >> UV Intensity (mW/cm^2) >> Temperature (°C , °F) >> Humidity (%) >> Cumulative Illuminance (lxh, klxh, Mlxh) >> Cumulative Amount of Ultraviolet Light (mW/cm^{2}h, W/cm^{2}h) >> Back to the Alternate Display. By pressing the Display Button it is possible to switch between continually viewing all items in a cycle or select only certain items for view.

INTERVAL Button

Use this button to check the current Recording Interval and make any necessary changes to it.

REC/STOP Button

Use this to start and stop recording.

Up to Four Months of Operation on One Battery

Power is provided by one AA alkaline battery. If one RTR-574 at full logging capacity is downloaded once a day via wireless communication, the estimated battery life is about four months.

Note: * Battery life varies depending upon the type of battery, the measuring environment, the frequency of communication, and the ambient temperature in which it is used. All estimates are based on operations carried out with a new battery and are in no way a guarantee of actual battery life.
* There are no L–types models of RTR–574.

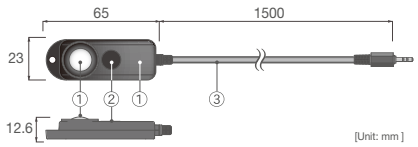
Possible to Adjust Measurements

An Adjustment Function has been included to aid in the adjustment of measurements. This Function can be set up with the "Adjustment Tools" application in the software supplied with the Base Unit.

Sensors for RTR-574

Illuminance UV Sensor

ISA-3151

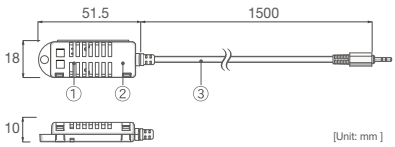


Measurement Range:
Illuminance: 0 lx to 130 klx
UV Intensity: 0 to 30 mW/cm^2
Measurement Resolution:
Illuminance: Minimum of 0.01 lx
UV Intensity: Minimum of 0.001 mW/cm^2
Accuracy:
Illuminance: ±5 % (10 lx to 100 klx at 25 °C, 50 %RH)
UV Intensity: ±5% (0.1 to 30 mW/cm² at 25 °C, 50 %RH) *1
Relative Spectral Response:
Illuminance: Approximated to the CIE standard response function V (λ).
UV Intensity: 260 to 400 nm
Operating Environment:
Temperature: –10 to 60 °C, Humidity: under 90 %RH (no condensation)

Materials: ① Polycarbonate (Illuminance Sensor Area) ② Glass (UV Intensity Sensor Area) ③ Vinyl Coated Electrical Wire

Temperature / Humidity Sensor

THA-3151

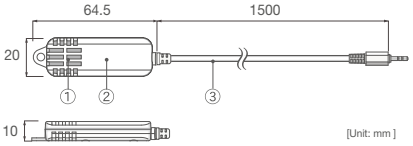


Measurement Range:
Temperature: 0 to 55 °C
Humidity: 10 to 95 %RH
(No condensation)
Measurement Resolution:
Temperature: 0.1 °C
Humidity: 1 %RH
Accuracy:
Temperature: ±0.5 °C
Humidity: ±5%RH (at 25 °C and 50%RH)
Response Time (90%): Approx. 7 min.

Materials: ① Temp/Humidity Sensor ② Polypropylene Resin ③ Vinyl Chloride Coated Electrical Wire

High Precision Temperature / Humidity Sensor

HHA-3151

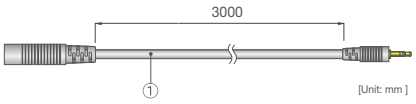


Measurement Range:
Temperature: –30 to 80 °C
Humidity: 0 to 99 %RH *3
Measurement Resolution:
Temperature: 0.1 °C
Humidity: 0.1 %RH
Accuracy (Temperature):
±0.3 °C (at 10 to 40 °C)
±0.5 °C (at all other temperatures)
Accuracy (Humidity):
±2.5 %RH (at 25 °C, 10 to 85 %RH), ±4 %RH (at 25 °C, 0 to 10 % or 85 to 99 %RH)
At temperatures other than 25 °C and ≥ 0 °C, add ±0.1%RH per degree of difference from 25.
Humidity Hysteresis: ±1.5 %RH or lower *3
Response Time (90%):
Temperature: Approx. 7 min.
Humidity: Approx. 20 sec.
Long Term Stability: ±1%RH/yr, ±0.1°C/yr (under normal operational conditions) *2

Materials: ① Temp/Humidity Sensor Area ② Polycarbonate ③ Vinyl Chloride Coated Electrical Wire

Sensor Extension Cable

TR-1C30



Temperature Durability: 25 to 60 °C

Materials: ① Vinyl Coated Electrical Wire

Note: Up to 3 extension cables can be connected to one sensor.

*1: Compared to the value measured by the T&D standard sensor for calibration under our calibration light source.
*2: Do not expose to condensation, dampness, corrosive gases or organic solvents.
*3: When used in environments where temperature and humidity are over the values of 50 °C 75 %, 60 °C 50 %, 70 °C 35 %, and 80 °C 25 %, sensor hysteresis may fluctuate by values greater than ±1.5 %RH. Under certain circumstances, it may take some time to return to normal measurement capability.

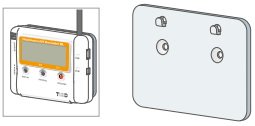
For RTR-574

Wall Attachment

TR-07K2

Contents:
Lock Screw x 2
Double-sided Adhesive tape
Screw Holes: 2 - ø4.2

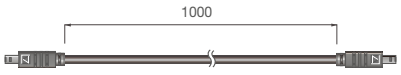
Material: Polycarbonate



Communication Cable

TR-6C10

Cable Length: 1.0m
For communication between RTR-500DC and RTR-574

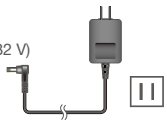


For RTR-500GSM

AC Adaptor

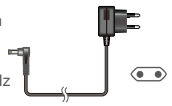
AD-0605

Cable Length: 1.8 m
Input: AC100 V (90 –132 V)
Output: DC 5V 2 A
Frequency: 50 / 60 Hz
Plug Type: A



AD-0605

Cable Length: 1.6 m
Input: AC100–240V
Output: DC 5 V 2 A
Frequency: 50 / 60Hz
Plug Type: C

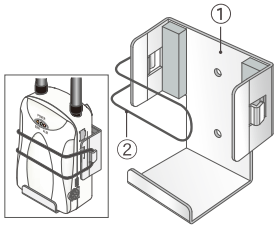


Wall Attachment

TR-5GK1

Contents:
Lock Screw x 2
Double-sided Adhesive tape

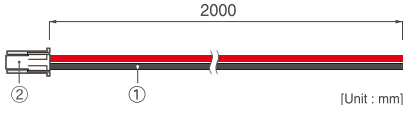
Materials: ① Aluminum ② Rubber



External Power Cable

BC-0201

Power Source Conditions:
Voltage: DC 8–34V
Current: MAX 2A



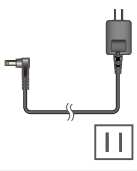
Materials: ① Cable: AWG#20, Red/ Plus (+), Black/ Minus (-) ② Connector: Housing/ XAP–02V–1, Contact/ SXA–01T-P0.6 (J.S.T. Mfg. Co., Ltd.)

For RTR-500NW / 500AW / 500 / 500DC

AC Adaptor

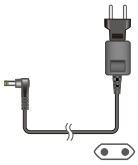
AD-0638

Cable Length: 1.8 m
Input: AC100–240 V
Output: DC6 V 500 mA
Frequency: 50 / 60 Hz
Plug Type: A



AD-0638-C

Cable length: 1.8 m
Input: AC100–240 V
Output: DC6 V 500 mA
Frequency: 50 / 60 Hz
Plug Type: C



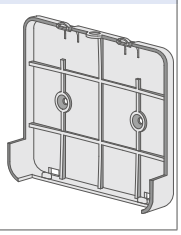
For RTR-500NW / 500AW

Wall Attachment

TR-5WK1

Contents:
Screw for fastening to wall x 2
Double-sided Tape
Screw for fastening Unit

Material: PC Resin



Remote Unit

Product	RTR-574		RTR-574-H	
Temperature/Humidity Sensor (External)	THA-3151		HHA-3151 (High-Precision Type)	
	Thermistor	Polymer Resistance	Platinum Resistance	Electrostatic Capacitance
Measurement Channels	Temperature 1ch	Humidity 1ch	Temperature 1ch	Humidity 1ch
Units of Measurement	°C, °F	%RH	°C, °F	%RH
Measurement Range	0 to 55 °C	10 to 95 %RH	-30 to 80 °C	0 to 99 %RH
Accuracy	±0.5 °C	±5 %RH (at 25 °C, 50 %RH)	±0.3 °C (at 10 to 40 °C) ±0.5 °C (at all other temperatures)	±2.5 %RH (at 25 °C, 10 to 85 %RH) ±4.0 %RH (at 25 °C, 0 to 10 % or 85 to 99 %RH) At temperatures other than 25 °C and ≥ 0 °C, add ±0.1 %RH per degree of difference from 25. Humidity Hysteresis: ±1.5 %RH or lower (*1)
Measurement Resolution	0.1 °C	1 %RH	0.1 °C	0.1 %RH
Responsiveness	Response Time (90 %): Approx. 7 min.		Response Time (90 %): Approx. 7 min.	Response Time (90 %): Approx. 20 sec.

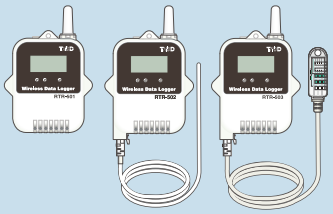
Illuminance / UV Sensor (External)	ISA-3151
Measurement Channels	Illuminance: 1ch UV intensity: 1ch
Units of Measurement	Illuminance: lx, klx UV intensity: mW/cm^2
Measurement Range	Illuminance: 0 lx to 130 klx UV Intensity: 0 to 30 mW/cm^2
Units of Cumulative Measurement	Cumulative Illuminance: lxh, klxh, Mlxh Cumulative amount of UV Light: mW/cm^2, W/cm^2
Display Range of Cumulative Measurement	Illuminance: 0 lxh to 90 Mlxh UV intensity: 0 mW to 62 W/cm^{2}h
Accuracy	Illuminance: 10 lx to 100 klx : ±5 % (at 25 °C, 50 %RH) UV Intensity: 0.1 to 30 mW/cm^2 : ±5 % (at 25 °C, 50 %RH) (*2)
Relative Spectral Response	Illuminance: Approximated to the CIE standard response function V (λ) UV Intensity: 260 to 400 nm
Measurement Resolution	Illuminance: Minimum of 0.01 lx UV Intensity: Minimum of 0.001 mW/cm^2
Responsiveness	Response Time (90%): 3 sec. (at recording interval of 1 sec.) 6 sec. (at other intervals)

Logging Capacity	8,000 data sets (One data set consists of readings for all channels in that type of unit.)
Recording Interval	Select from 15 choices: 1, 2, 5, 10, 15, 20, 30 sec. or 1, 2, 5, 10, 15, 20, 30, 60 min.
Recording Mode (*3)	Endless (Overwrite oldest data when capacity is full) or One Time (Stop recording when capacity is full)
LCD Display Items	Measurements, Battery Life Warning, etc. Measurements: Illuminance / UV Intensity / Temperature / Humidity / Cumulative Illuminance / Cumulative amount of UV Light Display Pattern: Alternating or Fixed display Display Digits: Up to 4 digits
Communication Interfaces	Wireless Communication (Short Range Radio Communication) FCC Part15 Section247 / IC RSS-210 (Frequency Range: 902 to 928 MHz, RF Power: 7 mW) ETSI EN 300 220 (Frequency Range: 869.7 to 870 MHz, RF Power: 5 mW) USB Communication Serial Communication (RS-232C) (*4)
Wireless Transmission Range	Approx. 150 meters (500 ft) if direct and unobstructed
Power	AA Alkaline Battery (LR6) x 1
Battery Life (*5)	Approx. 4 months
Dimensions	H 55 mm x W 78 mm x D 18 mm (excluding protrusions) Antenna Length: 60 mm
Weight	About 68 g (including battery, excluding sensor)
Operating Environment	Temperature: -10 to 60 °C Humidity: 90 %RH or less (no condensation)
Accessories	AA alkaline battery (LR6), USB Communication Cable (US-15C), Illuminance/UV Sensor (ISA-3151), Temperature/Humidity Sensor (THA-3151 or HHA-3151), Software (CD-ROM), User's Manual Set (Warranty Included)
Compatible Base Units	RTR-500, RTR-500NW/500AW, RTR-500DC

*1: When used in environments where temperature and humidity are over the values of 50°C 75%, 60°C 50%, 70°C 35%, and 80°C 25 %, sensor hysteresis may fluctuate by values greater than ±1.5 %RH. Under certain circumstances, it may take some time to return to normal measurement capability.
*2: Compared to the value measured by the T&D standard sensor for calibration under our calibration light source.
*3: Only "Endless" is available when using RTR-500W for Windows.
*4: Customers wishing to write their own software, please contact your local distributor for the serial communications protocol specifications. (Note: Optional serial communication cable TR-07C is also required.)
*5: Battery life varies depending upon the ambient temperature in which it is used, the recording interval, the frequency of communication, and the battery performance. All estimates are based on operations carried out with a new battery and are in no way a guarantee of actual battery life.
The specifications listed above are subject to change without notice.

System Setup

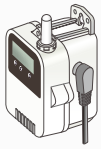
Remote Unit
RTR-501 / 502 / 503
(Sensor Included)

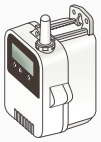


RTR-505
(Input Module or
Input Cable Included)

Power

Lithium Battery
inserted into a tube
(LS14250 (SAFT)
Included



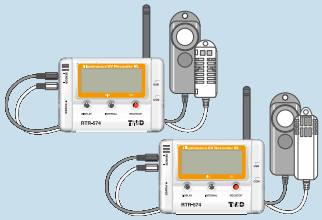


RTR-500A1
External Power
Adaptor Kit
Sold Separately

RTR-500B1 *
Large Capacity
Battery Adaptor Kit
Sold Separately

* When using RTR-500B1 it is necessary to purchase Lithium Battery (LS26500).

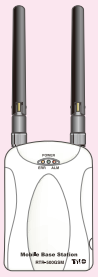
RTR-574
(Sensor Included)



Power

AA Alkaline Battery x1
Included

Base Unit
RTR-500GSM

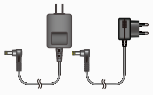


Power

AA Alkaline
Battery x 4
Included

or

AC Adaptor
Sold Separately
AD-0605 or AD-05C1



or

External Power Cable
BC-0201
Included

Install

Software

USB Cable (US-15C)

Install
Connect

Purchase Extra Items Separately for RTR-500GSM
We do not handle or sell these items.

SIM Card
Required item for operation

External Output / Input Compatible Connector

External Power Supply

Voltage : DC 8-34V
Current : MAX 2A

GPS Reciever

Base Unit / Repeater
RTR-500

Software

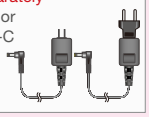
USB Cable (US-15C)

Install
Connect

Power

Use as a Repeater
AA Alkaline
Battery x2
Not Included

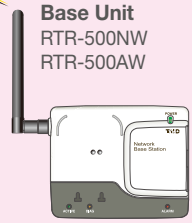
AC Adaptor
Sold Separately
AD-0638 or
AD-0638-C



Initial Settings
Function Settings

*It is not possible to simultaneously connect more than one Base Unit to a PC.

Base Unit
RTR-500NW
RTR-500AW



Software

Install
Connect

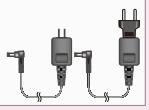
USB Cable (US-15C)

LAN Cable for 500AW (LN-20W)

Connect

Power

AC Adaptor
Sold Separately
AD-0638 or
AD-0638-C



Some devices such as a hub, wireless LAN access point, server, and so on are sold separately and may be necessary to connect to a local network. T&D does not manufacture or sell these items.

Base Unit
RTR-500DC

Software

Install
Connect

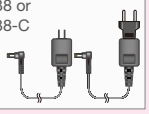
USB Cable (US-15C)

Power

AAA Alkaline
Battery x2

Nickel Hydride
Battery x2
Not Included

AC Adaptor
Sold Separately
AD-0638 or
AD-0638-C



Initial Settings
Function Settings

T&D Website
For product information, software update and FAQ ;
http://www.tandd.com/

Caution regarding safety
For safe operation carefully read instructions before using the product.

Distributor

T&D Corporation
817-1 Shimadachi, Matsumoto, Nagano Japan 390-0852
Please send your inquiries to:
E-mail : sales@tandd.com
Facsimile : (+81) 263-40-3152

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